

REMARKS

Claims 1-5, 7-17 and 19-22 are currently pending in the subject application and are presently under consideration. Claims 1, 10, 11, 14, 16, 17, 21 and 22 have been amended as shown at pages 9-13 of the Reply. In addition, the specification has been amended as indicated at pages 2-9.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 10, 11 and 16 Under 35 U.S.C §112

Claims 10, 11 and 16 stand rejected because they contain the trademark/trade name "PCI Express". Claims 10, 11 and 16 have been amended to recite the generic name for PCI Express, peripheral component interconnect express. PCI Express is a registered Trademark; however contrary to assertions in the Office Action peripheral component interconnect express is not a registered trademark and it is also well known to any person skilled in the art that this generic name for PCI Express refers to a particular type of bus architecture. Therefore, this rejection should be withdrawn.

II. Rejection of Claims 1-5, 7-16 and 21-22 Under 35 U.S.C. §101

Claims 1-5, 7-16 and 21-22 are rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. The Federal Circuit has clearly established in *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338 (Fed. Cir. 2005) and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999) that inventions such as that claimed by applicant are statutory.

This court must also decide whether software code made in the United States and exported abroad is a "component of a patented invention" under 271(f)... Section 271(f) refers to "components of a patented invention"... Title 35, section 101, explains that an invention includes "any new and useful process, machine, manufacture or composition of matter"... Without question, *software code alone qualifies as an invention eligible for patenting under these categories*, at least as processes. *Eolas*

Techs., Inc. v. Microsoft Corp., 399 F.3d 1325, 1338 (Fed. Cir. 2005). (Emphasis added).

The Federal Circuit in *Eolas Techs., Inc. v. Microsoft Corp.* clearly established that software code alone is statutory subject matter. By the standards set forth in the above decision, a computer implemented system in the form of software, hardware, or the combination of both clearly falls within the categories of statutory subject matter. Although applicants' representative believes that the claims as previously submitted were directed to statutory subject, independent claims 1, 14, 21 and 22 have been amended to recite embodiment on a computer readable medium.

In view of at least the foregoing, it is readily apparent that applicant's invention as recited in independent claims 1, 14, 21 and 22 (and associated dependent claims 2-13, 15, 16) is statutory subject matter and produces a useful, concrete, and tangible result. Accordingly, withdrawal of this rejection is respectfully requested.

III. Rejection of Claims 1-5, 7-17 and 19-22 Under 35 U.S.C. §103(a)

Claims 1-5, 7-17 and 19-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sanfranek *et al.* (US Pub 2004/0193755) in view of Kondratiev *et al.* (US Patent 6,922,740). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Sanfranek *et al.* and Kondratiev *et al.*, alone or in combination, do not teach each and every element of applicants' invention as recited in the subject claims.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. See *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Independent claim 1 (and similarly independent claims 14, 17, 21 and 22) recites *an access data store that stores access information associated with memory, the access data store comprising an access table, the access table comprising a source identifier field, a memory address field and an access attribute field, **the access attribute field distinguishes from amongst two or more of read, read and write, write, and no access to indicate access for a combination of source and memory range identified in the source identifier and memory address fields;** and a memory controller that employs the access information to determine whether a requested direct memory access is permitted and rejects the requested direct memory access if it is not permitted.* As conceded in the Office Action, Sanfrank et al. does not teach or suggest the aforementioned novel aspects of applicant's invention as recited in the subject claims. The cited art discloses a method for preventing non-CPU devices from accessing protected memory. This is accomplished by maintaining a NODMA memory cache where each bit in the cache represents a page of memory. The setting of the bit (0 or 1) determines if the associated memory page is protected. If a memory access request for a page comes from a non-CPU device and the NODMA cache indicates that the page is protected, the access will be denied. However, this provides very fine control of memory pages, but lacks the combined source, memory, and access type control of the subject claim. Kondratiev et al. is cited to make up for the above noted deficiencies of Sanfrank et al. Kondratiev et al. teaches a system for controlling DMA access from devices. The cited art discloses a table that contains rows containing device ID, read memory range, write memory range and duration. This provides an access control list that indicates memory ranges a device is allowed to access. However, the table *only* indicates memory ranges that are allowed access. Moreover, read and write access are indicated in two separate fields. The access attribute in applicant's claimed invention provides both allowed and disallowed access information including access type within a single field. This provides allowed and disallowed control information to be stored together, as well as providing both types of information for a single device. For example, the table can have an entry for device A indicating read access for memory range X and another entry for device A indicating no access for memory range Z. Kondratiev et al. and Sanfrank et al., fail to teach or suggest the access attribute field *distinguishes from amongst **two or more of read, read and write, write, and no access** to indicate*

access for a combination of source and memory range identified in the source identifier and memory address fields.

Accordingly, applicants' representative respectfully submits that Sanfrank *et al.* and Kondratiev *et al.*, alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in independent claims 1, 14, 17, 21 and 22 (and claims 2-5, 7-13, 15, 16, 19 and 20 that depend there from) and thus fails to make obvious the subject claimed invention. For this reason, this rejection should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP553US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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